

Scientific Questions for Scientific Thinkers

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

Intellectual Development Foundation

Preface

This piece of writing is a guide which consists of scientific questions for scientific thinkers. The questions are designed to understand and apply the principles which allow us to study anything systematically. For teachers, this provides a Simple Unified Instructional System to guide students to study anything systematically. For students, this is a scientific thinking supplement to any textbook for any science course. Teachers can use this to design science instruction, assignments, and tests. Students can use this to improve their perspective in any domain of science.

Generic scientific thinking skills apply to all sciences. For example, scientific thinkers are clear as to the purpose at hand and the question at issue. They question information, conclusions, and points of view. They strive to be accurate, precise, and relevant. They seek to think beneath the surface, to be logical, and objective. They apply these skills to their reading and writing as well as to their speaking and listening. They apply them in professional and personal life.

When this guide is used as a supplement to the science textbook in multiple courses, students begin to perceive the application of scientific thinking to many domains in everyday life. And if their instructors provide examples of the application of scientific thinking to daily life, students begin to see scientific thinking as a tool for improving the quality of their lives.

If you are a student using this guide, get in the habit of carrying it with you to every science class. Consult it frequently in analyzing and synthesizing what you are learning. Aim for deep internalization of the principles you find in this - until using them becomes second nature.

If successful, this guide will serve faculty, students, and the science program simultaneously. This work is based on the *Simple Unified Instructional System* developed by Intellectual Development Foundation. This piece of writing is not organized into chapters. Every page has a set questions to study different things systematically.

Excellence in scientific thinking must be systematically cultivated.

What properties of cell allow us to study it systematically?

Listed below are the properties of cell which allow us to study it systematically.

1. Divisibility

Can cell exhibit divisibility? Yes. Cell has divisibility and it can be divided into things called the parts of cell.

- What are the parts of cell?

2. Comparability

Can cell exhibit comparability? Yes. Cell has comparability and it can be compared to all the other things. Anything which cannot be compared to cell is neither different nor similar to cell.

- What is that which is neither different nor similar to cell?

3. Connectivity

Can cell exhibit connectivity? Yes. Cell has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to cell?

4. Disturbability

Can cell exhibit disturbability? Yes. Cell has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect cell?

5. Reorderability

Can cell exhibit reorderability? Yes. Cell has reorderability and it can be reordered from one form to its other forms.

- What forms are not of cell?

6. Substitutability

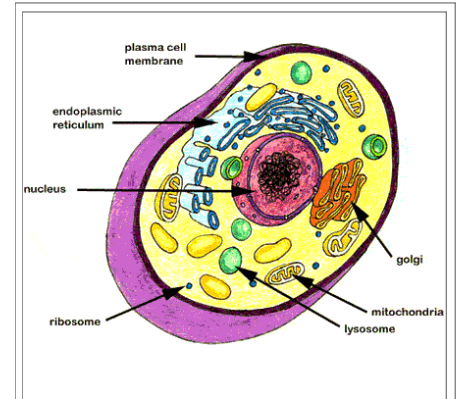
Can cell exhibit substitutability? Yes. Cell has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute cell?

7. Satisfiability

Can cell exhibit satisfiability? Yes. Cell has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by cell?



Hai! You know well about cell, but do you have the knowledge to answer the questions about cell?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of chromosome allow us to study it systematically?

Listed below are the properties of chromosome which allow us to study it systematically.

1. Divisibility

Can chromosome exhibit divisibility? Yes. Chromosome has divisibility and it can be divided into things called the parts of chromosome.

- What are the parts of chromosome?

2. Comparability

Can chromosome exhibit comparability? Yes. Chromosome has comparability and it can be compared to all the other things. Anything which cannot be compared to chromosome is neither different nor similar to chromosome.

- What is that which is neither different nor similar to chromosome?

3. Connectivity

Can chromosome exhibit connectivity? Yes. Chromosome has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to chromosome?

4. Disturbability

Can chromosome exhibit disturbability? Yes. Chromosome has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect chromosome?

5. Reorderability

Can chromosome exhibit reorderability? Yes. Chromosome has reorderability and it can be reordered from one form to its other forms.

- What forms are not of chromosome?

6. Substitutability

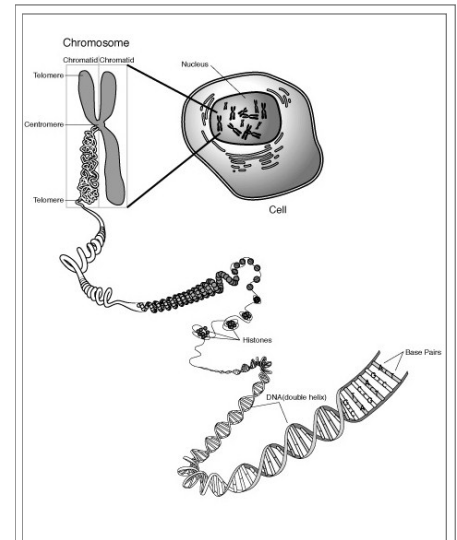
Can chromosome exhibit substitutability? Yes. Chromosome has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute chromosome?

7. Satisfiability

Can chromosome exhibit satisfiability? Yes. Chromosome has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by chromosome?



Hai! You know well about chromosome, but do you have the knowledge to answer the questions about chromosome?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of plasma membrane allow us to study it systematically?

Listed below are the properties of plasma membrane which allow us to study it systematically.

1. Divisibility

Can plasma membrane exhibit divisibility? Yes. Plasma membrane has divisibility and it can be divided into things called the parts of plasma membrane.

- What are the parts of plasma membrane?

2. Comparability

Can plasma membrane exhibit comparability? Yes. Plasma membrane has comparability and it can be compared to all the other things. Anything which cannot be compared to plasma membrane is neither different nor similar to plasma membrane.

- What is that which is neither different nor similar to plasma membrane?

3. Connectivity

Can plasma membrane exhibit connectivity? Yes. Plasma membrane has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to plasma membrane?

4. Disturbability

Can plasma membrane exhibit disturbability? Yes. Plasma membrane has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect plasma membrane?

5. Reorderability

Can plasma membrane exhibit reorderability? Yes. Plasma membrane has reorderability and it can be reordered from one form to its other forms.

- What forms are not of plasma membrane?

6. Substitutability

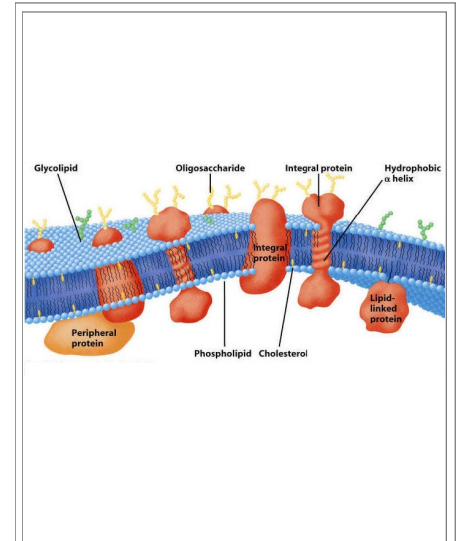
Can plasma membrane exhibit substitutability? Yes. Plasma membrane has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute plasma membrane?

7. Satisfiability

Can plasma membrane exhibit satisfiability? Yes. Plasma membrane has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by plasma membrane?



Hai! You know well about plasma membrane, but do you have the knowledge to answer the questions about plasma membrane?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of ribosome allow us to study it systematically?

Listed below are the properties of ribosome which allow us to study it systematically.

1. Divisibility

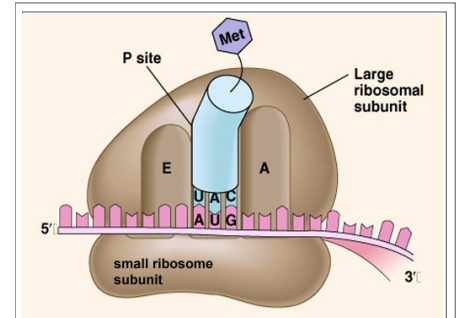
Can ribosome exhibit divisibility? Yes. Ribosome has divisibility and it can be divided into things called the parts of ribosome.

- What are the parts of ribosome?

2. Comparability

Can ribosome exhibit comparability? Yes. Ribosome has comparability and it can be compared to all the other things. Anything which cannot be compared to ribosome is neither different nor similar to ribosome.

- What is that which is neither different nor similar to ribosome?



Hai! You know well about ribosome, but do you have the knowledge to answer the questions about ribosome?

3. Connectivity

Can ribosome exhibit connectivity? Yes. Ribosome has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to ribosome?

4. Disturbability

Can ribosome exhibit disturbability? Yes. Ribosome has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect ribosome?

5. Reorderability

Can ribosome exhibit reorderability? Yes. Ribosome has reorderability and it can be reordered from one form to its other forms.

- What forms are not of ribosome?

6. Substitutability

Can ribosome exhibit substitutability? Yes. Ribosome has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute ribosome?

7. Satisfiability

Can ribosome exhibit satisfiability? Yes. Ribosome has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by ribosome?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of chloroplast allow us to study it systematically?

Listed below are the properties of chloroplast which allow us to study it systematically.

1. Divisibility

Can chloroplast exhibit divisibility? Yes. Chloroplast has divisibility and it can be divided into things called the parts of chloroplast.

- What are the parts of chloroplast?

2. Comparability

Can chloroplast exhibit comparability? Yes. Chloroplast has comparability and it can be compared to all the other things. Anything which cannot be compared to chloroplast is neither different nor similar to chloroplast.

- What is that which is neither different nor similar to chloroplast?

3. Connectivity

Can chloroplast exhibit connectivity? Yes. Chloroplast has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to chloroplast?

4. Disturbability

Can chloroplast exhibit disturbability? Yes. Chloroplast has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect chloroplast?

5. Reorderability

Can chloroplast exhibit reorderability? Yes. Chloroplast has reorderability and it can be reordered from one form to its other forms.

- What forms are not of chloroplast?

6. Substitutability

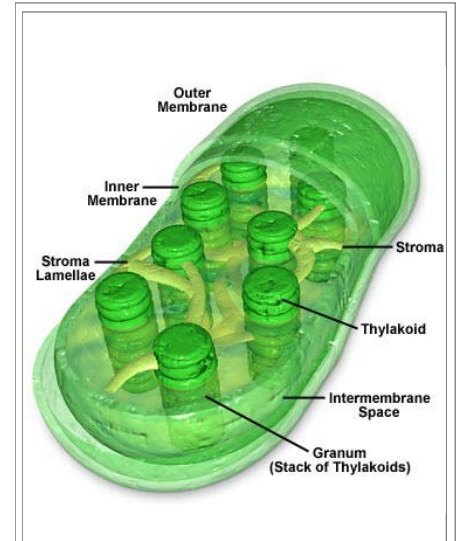
Can chloroplast exhibit substitutability? Yes. Chloroplast has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute chloroplast?

7. Satisfiability

Can chloroplast exhibit satisfiability? Yes. Chloroplast has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by chloroplast?



Hai! You know well about Earth, but do you have the knowledge to answer the questions about Earth?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of endoplasmic reticulum allow us to study it systematically?

Listed below are the properties of endoplasmic reticulum which allow us to study it systematically.

1. Divisibility

Can endoplasmic reticulum exhibit divisibility? Yes. Endoplasmic reticulum has divisibility and it can be divided into things called the parts of endoplasmic reticulum.

- What are the parts of endoplasmic reticulum?

2. Comparability

Can endoplasmic reticulum exhibit comparability? Yes. Endoplasmic reticulum has comparability and it can be compared to all the other things. Anything which cannot be compared to endoplasmic reticulum is neither different nor similar to endoplasmic reticulum.

- What is that which is neither different nor similar to endoplasmic reticulum?

3. Connectivity

Can endoplasmic reticulum exhibit connectivity? Yes. Endoplasmic reticulum has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to endoplasmic reticulum?

4. Disturbability

Can endoplasmic reticulum exhibit disturbability? Yes. Endoplasmic reticulum has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect endoplasmic reticulum?

5. Reorderability

Can endoplasmic reticulum exhibit reorderability? Yes. Endoplasmic reticulum has reorderability and it can be reordered from one form to its other forms.

- What forms are not of endoplasmic reticulum?

6. Substitutability

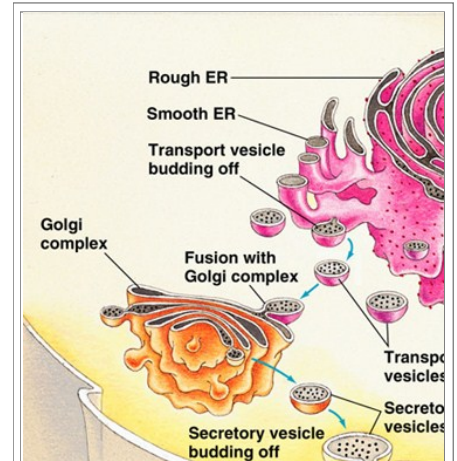
Can endoplasmic reticulum exhibit substitutability? Yes. Endoplasmic reticulum has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute endoplasmic reticulum?

7. Satisfiability

Can endoplasmic reticulum exhibit satisfiability? Yes. Endoplasmic reticulum has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by endoplasmic reticulum?



Hai! You know well about endoplasmic reticulum, but do you have the knowledge to answer the questions about endoplasmic reticulum?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of lysosome allow us to study it systematically?

Listed below are the properties of lysosome which allow us to study it systematically.

1. Divisibility

Can lysosome exhibit divisibility? Yes. Lysosome has divisibility and it can be divided into things called the parts of lysosome.

- What are the parts of lysosome?

2. Comparability

Can lysosome exhibit comparability? Yes. Lysosome has comparability and it can be compared to all the other things. Anything which cannot be compared to lysosome is neither different nor similar to lysosome.

- What is that which is neither different nor similar to lysosome?

3. Connectivity

Can lysosome exhibit connectivity? Yes. Lysosome has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to lysosome?

4. Disturbability

Can lysosome exhibit disturbability? Yes. Lysosome has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect lysosome?

5. Reorderability

Can lysosome exhibit reorderability? Yes. Lysosome has reorderability and it can be reordered from one form to its other forms.

- What forms are not of lysosome?

6. Substitutability

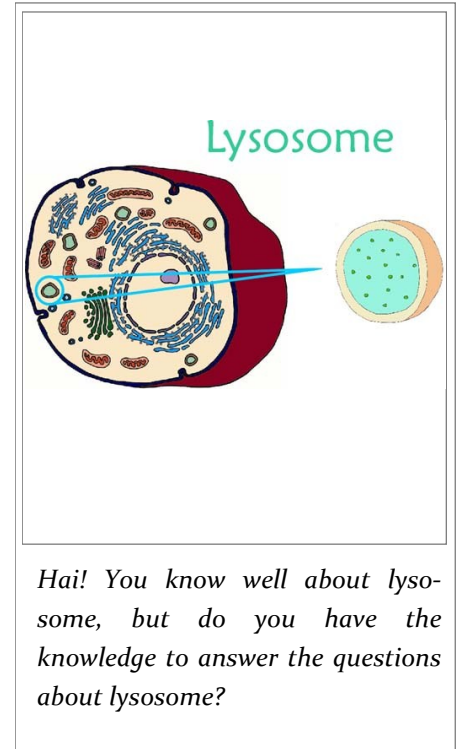
Can lysosome exhibit substitutability? Yes. Lysosome has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute lysosome?

7. Satisfiability

Can lysosome exhibit satisfiability? Yes. Lysosome has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by lysosome?



What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of nucleus allow us to study it systematically?

Listed below are the properties of nucleus which allow us to study it systematically.

1. Divisibility

Can nucleus exhibit divisibility? Yes. Nucleus has divisibility and it can be divided into things called the parts of nucleus.

- What are the parts of nucleus?

2. Comparability

Can nucleus exhibit comparability? Yes. Nucleus has comparability and it can be compared to all the other things. Anything which cannot be compared to nucleus is neither different nor similar to nucleus.

- What is that which is neither different nor similar to nucleus?

3. Connectivity

Can nucleus exhibit connectivity? Yes. Nucleus has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to nucleus?

4. Disturbability

Can nucleus exhibit disturbability? Yes. Nucleus has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect nucleus?

5. Reorderability

Can nucleus exhibit reorderability? Yes. Nucleus has reorderability and it can be reordered from one form to its other forms.

- What forms are not of nucleus?

6. Substitutability

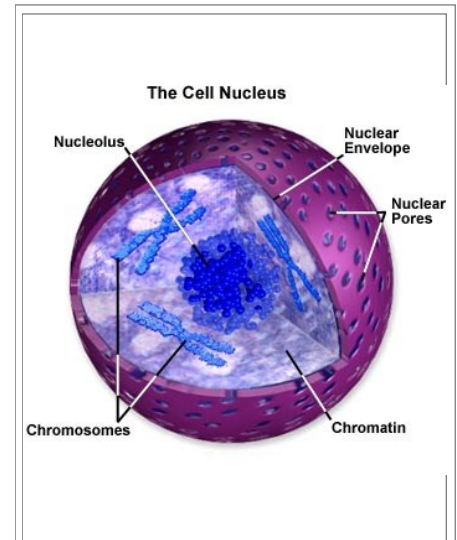
Can nucleus exhibit substitutability? Yes. Nucleus has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute nucleus?

7. Satisfiability

Can nucleus exhibit satisfiability? Yes. Nucleus has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by nucleus?



Hai! You know well about nucleus, but do you have the knowledge to answer the questions about nucleus?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of mitochondrion allow us to study it systematically?

Listed below are the properties of mitochondrion which allow us to study it systematically.

1. Divisibility

Can mitochondrion exhibit divisibility? Yes. Mitochondrion has divisibility and it can be divided into things called the parts of mitochondrion.

- What are the parts of mitochondrion?

2. Comparability

Can mitochondrion exhibit comparability? Yes. Mitochondrion has comparability and it can be compared to all the other things. Anything which cannot be compared to mitochondrion is neither different nor similar to mitochondrion.

- What is that which is neither different nor similar to mitochondrion?

3. Connectivity

Can mitochondrion exhibit connectivity? Yes. Mitochondrion has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to mitochondrion?

4. Disturbability

Can mitochondrion exhibit disturbability? Yes. Mitochondrion has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect mitochondrion?

5. Reorderability

Can mitochondrion exhibit reorderability? Yes. Mitochondrion has reorderability and it can be re-ordered from one form to its other forms.

- What forms are not of mitochondrion?

6. Substitutability

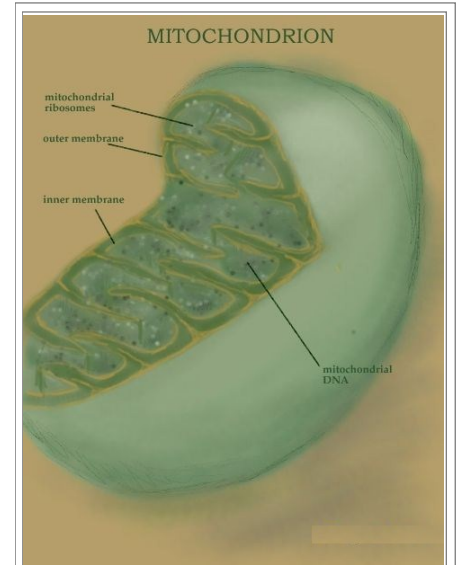
Can mitochondrion exhibit substitutability? Yes. Mitochondrion has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute mitochondrion?

7. Satisfiability

Can mitochondrion exhibit satisfiability? Yes. Mitochondrion has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by mitochondrion?



Hai! You know well about mitochondrion, but do you have the knowledge to answer the questions about mitochondrion?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?

What properties of cytoskeleton allow us to study it systematically?

Listed below are the properties of cytoskeleton which allow us to study it systematically.

1. Divisibility

Can cytoskeleton exhibit divisibility? Yes. Cytoskeleton has divisibility and it can be divided into things called the parts of cytoskeleton.

- What are the parts of cytoskeleton?

2. Comparability

Can cytoskeleton exhibit comparability? Yes. Cytoskeleton has comparability and it can be compared to all the other things. Anything which cannot be compared to cytoskeleton is neither different nor similar to cytoskeleton.

- What is that which is neither different nor similar to cytoskeleton?

3. Connectivity

Can cytoskeleton exhibit connectivity? Yes. Cytoskeleton has connectivity and it can be connected to all the other things which hold it.

- What is that which cannot be connected to cytoskeleton?

4. Disturbability

Can cytoskeleton exhibit disturbability? Yes. Cytoskeleton has disturbability and it can be disturbed (affected) by the things which can influence it.

- What is that which cannot affect cytoskeleton?

5. Reorderability

Can cytoskeleton exhibit reorderability? Yes. Cytoskeleton has reorderability and it can be reordered from one form to its other forms.

- What forms are not of cytoskeleton?

6. Substitutability

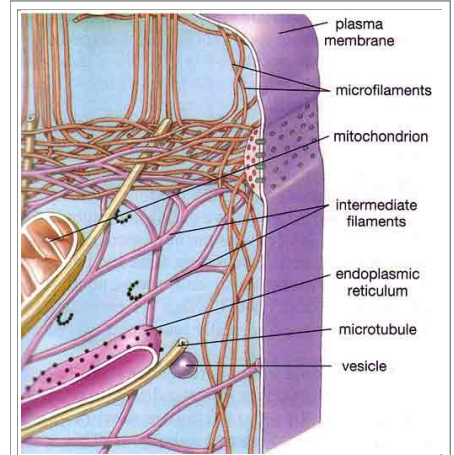
Can cytoskeleton exhibit substitutability? Yes. Cytoskeleton has substitutability and it can be substituted by the things which qualify to substitute it.

- What is that which cannot qualify to substitute cytoskeleton?

7. Satisfiability

Can cytoskeleton exhibit satisfiability? Yes. Cytoskeleton has satisfiability and it can satisfy those which require it.

- What is that which cannot be satisfied by cytoskeleton?



Hai! You know well about cytoskeleton, but do you have the knowledge to answer the questions about cytoskeleton?

What will you do if no thing has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability?



Anything which one can identify has divisibility, comparability, connectivity, disturbability, reorderability, substitutability, and satisfiability!